

## Abstract

A bicycle hub having a fluid automatic transmission receiving power input from the rider which uses drag to transfer power from an outer shell being rotated by the drive train to a stator and using applied torque to automatically control mechanical advantage in a limited manner by changing drag, this with flow restriction to limit the amount of shear possible thus the device is a fluid couple with torque-converter qualities. The ability to respond to torque in a way that changes mechanical advantage in a manner that the rider considers normal bicycle operation over varied terrain is what makes the device a fluid automatic bicycle transmission. The apparatus is appropriate to small and fractional horsepower applications in general.